

2020

WELCOME TO

# WAIKATO

The beating heart of New Zealand

ENVIRONMENT

## WHEN OUR ENVIRONMENT IS HEALTHY, SO ARE OUR COMMUNITIES

**Our green spaces, rivers and beaches are a taonga, an important part of our life and identity and something we all love about our region.**

We want to act as kaitiaki for our natural environment and there are many groups and individuals across the region taking action to protect and improve our land and waterways for future generations.

Climate change and water conservation are high priorities, interwoven with issues of ecological conservation, biodiversity, waste reduction, recycling systems, gully restoration, and clean, sustainable transport. Some people have concerns about urban development and growth coming at the expense of green spaces, water supply and healthy rivers.

As we look to a more resilient future, questions are being asked about time, resource, regulatory requirements and funding support for environmental initiatives. How can we work together more effectively, at flaxroots level and with local and national government, to generate greater impact?

“How do we create economic growth whilst looking after papatuanuku and our awa?”

– South Waikato survey respondent

# River water quality

We use our rivers, streams and oceans for recreation, food and commercial purposes. Concerns about water quality, water supply, drought and flooding are widely shared across the region.

“Water quality, drought and flooding are a challenge. Water is our most important resource.”

– Ōtorohanga workshop participant

Monitoring of rivers and streams across the region helps assess river water quality for ecological health – the suitability of water quality for native water plants and animals to live in.

## WAIKATO RIVER

### Upper Waikato River

65% Excellent

28% Satisfactory

7% Unsatisfactory

### Lower Waikato River

44% Excellent

24% Satisfactory

32% Unsatisfactory

## COROMANDEL

67% Excellent

23% Satisfactory

10% Unsatisfactory

## WEST COAST

49% Excellent

29% Satisfactory

22% Unsatisfactory

## WAIIPA RIVER

44% Excellent

25% Satisfactory

31% Unsatisfactory

## HAURAKI

41% Excellent

24% Satisfactory

34% Unsatisfactory

## UPLAND WAIKATO

41% Excellent

18% Satisfactory

41% Unsatisfactory

## LOWLAND WAIKATO

32% Excellent

23% Satisfactory

45% Unsatisfactory

Source: River Water Quality for Ecological Health 2015-2019, Waikato Regional Council.

“There is a lack of attention to water quality. This is a nationwide concern as all local authorities pay lip service and indeed government agencies such as MPI will talk about fish numbers but never address the bigger issue.”

– Ōtorohanga workshop participant

WATER QUALITY NOT ONLY IMPACTS THE SURROUNDING HABITAT, IT CAN ALSO DIRECTLY AFFECT OTHER SITES IN THE RIVER CATCHMENT. ISSUES SUCH AS SOIL EROSION CAN LEAD TO SEDIMENTATION AND FLOODING DOWN RIVER, AND CONTAMINATION CAN FLOW TO OTHER SITES.

## Greenhouse gas emissions

Local solutions are essential to addressing climate change and the movement to a low carbon economy in New Zealand. Sharing insights between districts already exploring solutions can help us achieve more coordinated action to reduce emissions for everyone.

**12,646,982** tonnes\* Waikato Region  
**80,853,500** tonnes\* New Zealand

### METHANE

**56%** or **7,137,496** tonnes of the Waikato Region's emissions were generated by methane.

### NET EMISSIONS

Forestry removes about 44% of the Waikato Region's gross carbon dioxide emissions, bringing **net emissions** to **7,116,073 tonnes**. Carbon removal rates from forestry have decreased since 2015/2016 because re-planting and new planting rates have not kept pace with harvesting.

Overall, our net emissions have **increased** by 349,291 tonnes since 2015/2016.

### WHERE DO OUR EMISSIONS COME FROM?\*

**68%** Agriculture  
**16%** Transportation  
**13%** Stationary energy  
**2%** Waste  
**1%** Industrial processes and product use (IPPU)

Agriculture emissions have decreased by 4% since 2015/2016 mostly due to a decrease in dairy herd size in the Waikato. All other emissions sources have increased, with transportation seeing a significant 32% increase.

\* Gross emissions of carbon dioxide equivalent (t CO<sub>2</sub>e), July 2018 - June 2019.

### DISTRICT NET EMISSIONS\*\*

Each district has a different emissions source profile, with a clear difference between urban and rural pastoral land use. Taupo and Thames-Coromandel are carbon positive due to a high level of carbon removal from forestry.

<b>-1,335,139</b> tonnes Taupo (see note below)	<b>866,371</b> tonnes Otorohanga
<b>-117,864</b> tonnes Thames-Coromandel	<b>1,000,343</b> tonnes Hamilton City
<b>102,072</b> tonnes South Waikato	<b>1,484,493</b> tonnes Waipa
<b>420,668</b> tonnes Waitomo	<b>1,772,469</b> tonnes Matamata-Piako
<b>733,455</b> tonnes Hauraki	<b>2,189,304</b> tonnes Waikato District

\*\* Net emissions of carbon dioxide equivalent (t CO<sub>2</sub>e), July 2018 - June 2019.

Note: Taupo has not otherwise been included in this report, but has been included here due to its significant positive impact on the Waikato Region's emissions profile.

### NET EMISSIONS PER CAPITA\*\*\*

Our net emissions per capita are higher than the New Zealand average.

**15** tonnes Waikato Region  
**12** tonnes New Zealand

\*\*\* Net emissions of carbon dioxide equivalent (t CO<sub>2</sub>e), July 2018 - June 2019.

Source: Waikato Regional Council Waikato Region Greenhouse Gas Emissions Inventory for the period July 2018 to June 2019, prepared by EnviroStrat Ltd and AECOM April 2020.

“Climate change is becoming more of an issue. We saw our first Level 4 water restrictions this year. We watched farms turn brown and gardens die. Small talk centred around the drought and water conservation. We bookmarked the Met Service and watched the skies. It was like a warm-up crisis.”

– Waipa survey respondent

“I’m reluctant to take my family to another part of the country which I suspect will be harder hit by climate change.”

– Hamilton survey respondent

“We responded like this to Covid-19, but not the climate crisis. Now that we know we can change our behaviour, be more caring, more resourceful, adapt and be more resilient, how do we continue?”








– Waikato District survey respondent

“Assist people to learn about how to decarbonise their operations and offer funds to assist them. Prioritise funding for larger projects that are carbon neutral or carbon negative.”

– Hamilton survey respondent



## Environmental action 2019

-  **92%** involved in some type of action to protect the environment
-  **39%** recycle in general
-  **21%** compost kitchen/garden waste
-  **18%** plant trees
-  **11%** refuse supermarket plastic bags
-  **11%** use buses
-  **10%** reduced rubbish/waste

Source: People's personal environmental actions, 2019, Waikato Regional Council.

“There are gifted people in all sectors doing things individually – it’s about bringing them together.”

– Otorohanga workshop participant



## Waste recycling services

The proportion of the population who think waste recycling services have improved in their area over the past few years has declined across all districts since 2016.



“Organisations and governments put money aside for recycling...yet they hand out plastic water bottles at meetings and don’t listen or value concerns when raised.”

– Hamilton survey respondent

“We install complicated recycling systems without any discernible effort to reduce the problem in the first place. It always seems like a plaster over the sore!”

– Hamilton survey respondent

## Environmental attitudes

Understanding people's environmental attitudes\* gives us an idea of how much support there is for action or changes designed to protect the environment.

2016	2019
25% pro-ecological	40% pro-ecological
63% mid-ecological	47% mid-ecological
12% anti-ecological	13% anti-ecological

\* Attitude of the surveyed 15+ year population towards the environment, measured on the 6-item New Ecological Paradigm (NEP) scale.

“Appreciating te ao Maaori, the Maaori viewpoint in the environment, is important...connecting with the environment with your mind and your wairua.”

– Waitomo workshop participant

## Soil quality

**11%** of productive sites across the Waikato Region had satisfactory soil quality for their current land use in 2018.

**11%** 2018

**18%** 2010

**43%** 2005

The main soil quality issues in the Waikato Region are soil compaction, excessive nutrients, and loss of soil organic matter with the associated decrease in biological activity of microorganisms.

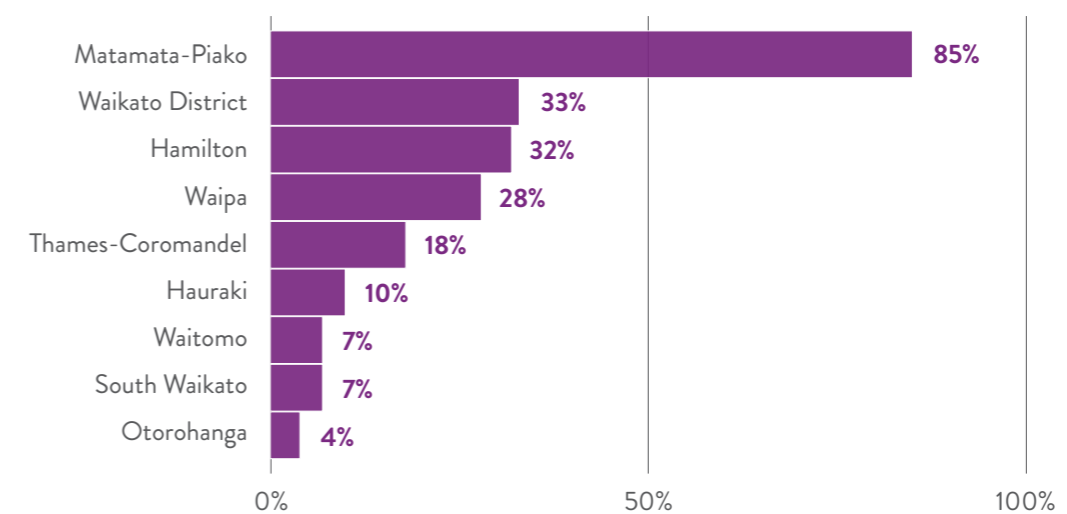
## Protecting biodiversity

**28%** of the Waikato Region's land is covered by **native vegetation**.

**59%** of our native vegetation is **legally protected** for conservation and biodiversity protection purposes.

### ACUTELY THREATENED\*

Some protected areas have **less than 10% native cover remaining**, which means they are acutely threatened. The amount of protected land that is acutely threatened varies across districts.



\* Percentage of the legally protected land area with indigenous cover that is acutely threatened.

“There is so much potential in the gully network as ecological jewels in the city, which people have been out and enjoying in lockdown.”

– Hamilton survey respondent

“We're lucky to have wonderful resources such as Lake Karapiro and the Maungatautari Ecological Island as part of our environment.”

– Waipa survey respondent



Waikato Wellbeing Project target



# Finding the leverage point

Gathering data and setting policy creates ‘silos’ of knowledge, as a way to understand the situation and then allocate resources.

The Waikato Vital Signs® project’s defined ‘Impact Areas’ – Strong Communities, Children and Youth, Economic Vitality, Education, Environment, Health, Arts-and-Culture and Recreation-and-Sport – focus the exercise and provide entry points for reader’s interest, while also reflecting how our society is imagined and organised.

However, when asked to prioritise these Impact Areas, numerous Waikato Vital Signs® 2020 Survey respondents suggested it was difficult and not helpful to do so, as society’s issues all intersect with each other. This interweaving is the very reason Vital Signs® projects seek subjective viewpoints to complement and respond to objective data, although that also clearly invites such a challenge.

These Impact Areas are certainly not sealed domains. Terms such ‘The Economy’ or ‘The Environment’ should be seen as descriptive points or poles, between which specific issues fall. For instance, one survey respondent suggested ‘Public Transport’ and ‘Aged Care’ should have been such headlines, but both can touch on most or all of these policy areas.

What the survey and workshop responses collectively reveal is that while everyone sees issues as inter-related, each of us tend to see one or two of the listed Impact Areas as being in the foreground. In turn, when we invest energy into addressing the issues we particularly care about, the focused effort can leverage positive change across the board.

Survey respondent Matthew Vare has both a neighbourhood and professional interest in the restoration of Hamilton’s gullies, which has led him to envision a strategic biodiversity solution with potentially wide-ranging benefits for the whole region.

The gullies fractally branch out from the Waikato River through Hamilton’s suburbs, often hidden behind the grid of houses built around them. For the first century of the city, they were treated as drains, dumps and out-the-back wastelands and divided up as private sections, but in recent years new housing developments have instead set them aside as public parks and native plants are being re-established by keen volunteer community groups in various furrows across the city.

“I am interested in ecological restoration and enhancing biodiversity and in how that activity can be done in ways that support community connection, provide education and employment, enable kaitiakitanga and connect city people to their natural environment,” says Matthew in his survey submission.



Biodiversity is in crisis around the world and natural habitats urgently need to be restored. This is a pressing need in cities as much as anywhere else, and indeed such conservation work near human populations offers multiple opportunities for positive change.

“Economic, education and wellbeing challenges can be met by taking a values-based approach to environmental enhancement, while also improving the underpinning life support systems that nature provides us,” says Matthew.

“Reversing environmental degradation is a big challenge but fixing it in a way that also provides for social, cultural and economic wellbeing is a massive opportunity.”

The environmental data collected for this report shows the extent of indigenous habitats in Hamilton and across the Waikato is either static or declining. The UN Sustainable Development Goal (SDG) for biodiversity for cities is ten per cent of their area given over to original vegetation – at present about 1.5% of Hamilton’s heritage greenery survives, replanting all its gullies would take that to 9.5%.

“A concerted, properly funded city-wide effort to restore the gullies, one that mobilises neighbours as partners and volunteers, would provide community connection, new skills training and employment, ecological and historical education, more recreational paths, improved air-soil-and-water quality, and the resulting wellbeing, health, economic and cultural benefits that come from all those outcomes,” says Matthew in a later interview.

Ultimately though, Hamilton’s gullies are just one piece of the regional biodiversity picture, only a dedicated Waikato-wide body can put together the whole puzzle by providing the “backbone support” that will allow local ecological efforts to achieve real collective impact.

“We need a funded professional organisation that can set the strategic goals for biodiversity across the Waikato, build and run an effective monitoring framework, do the research, support and improve the effectiveness of community restoration activities and be the public advocate for the effort and the outcomes,” says Matthew.

All our society’s issues are indeed inter-related, but entities that address specific challenges by honestly and equitably partnering expert knowledge and skills with local perspectives and enthusiasm can be the leverage point for positive change across the many challenges we face as a society.

**Waikato Vital Signs®**  
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